

Sequence Listing

<110> HUR, Man-Wook

<120> FUSION PROTEIN COMPRISING TATDMT POLYPEPTIDE

<160> 22

<170> KopatentIn 1.71

<210> 1

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Forward primer for Constructs 2-1 and 2-2 PCR

<400> 1

acgtaagctt accatggcgc cgacctcctg gaccgg

36

<210> 2

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Reverse primer for constructs 2-1 and 2-2 PCR

<400> 2

gacgaattc ggcgagtcgg gctgtgaagt t

31

<210> 3

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

Sequence Listing

<223> Reverse primer for Constructs 3-1 and 3-2 PCR

<400> 3

gacgaattc cgggctgggg tcgggcgcc cgcc

34

<210> 4

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Forward primer for Constructs 4-1 or 5-1, 2

<400> 4

acgtaagctt accatggggg acagcgacga gtc

33

<210> 5

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Reverse primer for constructs 4-1 or 5-1, 5-2

<400> 5

gacgaattc ggcgagtccg gctgtgaagt t

31

<210> 6

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Forward primer for 4-12FC PCR

Sequence Listing

<400> 6
acgtaagctt accatggggg acagcgacga gtc 33

<210> 7
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer for PCR ZF only

<400> 7
acgtaagctt accatggaga aggtggagaa gatccga 37

<210> 8
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer for PCR ZF only

<400> 8
acgtaagctt cgaggggacg ccgttcagc c 31

<210> 9
<211> 130
<212> PRT
<213> Artificial Sequence

<220>
<223> POZ-Domain

Sequence Listing

<400> 9
Met Ala Gly Gly Val Asp Gly Pro Ile Gly Ile Pro Phe Pro Asp His
1 5 10 15
Ser Ser Asp Ile Leu Ser Gly Leu Asn Glu Gln Arg Thr Gln Gly Leu
20 25 30
Leu Cys Asp Val Val Ile Leu Val Glu Gly Arg Glu Phe Pro Thr His
35 40 45
Arg Ser Val Leu Ala Ala Cys Ser Gln Tyr Phe Lys Lys Leu Phe Thr
50 55 60
Ser Gly Ala Val Val Asp Gln Gln Asn Val Tyr Glu Ile Asp Phe Val
65 70 75 80
Ser Ala Glu Ala Leu Thr Ala Leu Met Asp Phe Ala Tyr Thr Ala Thr
85 90 95
Leu Thr Val Ser Thr Ala Asn Val Gly Asp Ile Leu Ser Ala Ala Arg
100 105 110
Leu Leu Glu Ile Pro Ala Val Ser His Val Cys Ala Asp Leu Leu Asp
115 120 125
Arg Gln
130

<210> 10
<211> 73
<212> PRT
<213> Artificial Sequence

<220>
<223> TatdMt polypeptide

<400> 10

Sequence Listing

Met Glu Pro Val Asn Pro Ser Leu Glu Pro Trp Lys His Pro Gly Ser
 1 5 10 15

Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Ala Lys Cys Cys Phe
 20 25 30

His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly
 35 40 45

Arg Ala Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
 50 55 60

His Gln Val Ser Leu Ser Lys Leu Ile
 65 70

<210> 11
 <211> 106
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> AZF39

<220>
 <221> SIGNAL
 <222> (4)..(11)
 <223> NLS(Nuclear Localization Signal)

<400> 11
 Met Glu Leu Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile Pro
 1 5 10 15

Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg
 20 25 30

Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Pro
 35 40 45

Sequence Listing

Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu
 50 55 60

Arg Arg His Gly Arg Thr His Thr Gly Glu Lys Pro Phe Gln Cys Lys
 65 70 75 80

Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr
 85 90 95

Arg Thr His Thr Gly Glu Lys Ala Ala Ala
 100 105

<210> 12
 <211> 106
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> AZF40

<220>
 <221> SIGNAL
 <222> (4)..(11)
 <223> NLS(Nuclear Localization Signal)

<400> 12
 Met Glu Leu Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile Pro
 1 5 10 15

Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg
 20 25 30

Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Pro
 35 40 45

Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu

Sequence Listing

50					55					60					
Arg	Arg	His	Gly	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Phe	Gln	Cys	Lys
65					70					75					80
Thr	Cys	Gln	Arg	Lys	Phe	Ser	Arg	Ser	Asp	His	Leu	Lys	Thr	His	Thr
				85					90					95	
Arg	Thr	His	Thr	Gly	Glu	Lys	Ala	Ala	Ala						
			100					105							

<210>	13
<211>	318
<212>	DNA
<213>	Artificial Sequence

<220>
<223> AZF39

<400>	13	
atggaattgc ctccaaaaaa gaagagaaag gtagggatcc gaattcccg	ggaaaaaccg	60
ttccagtgtgta aaacttgtca gcgaaagtgc tcccggtccg accacctgaa	gacccacacc	120
aggactcata ccggggaaaa accgtataaa tgtaagcaat gtggaagga	ttttggatgt	180
ccctcaaacc ttcgaaaggca tggaaggact cacaccggg	aaaaaccgtt ccagtgtaaa	240
acttgtcagc gaaagtcttc ccggtccgac cacctgaaga cccacaccag	gactcatacc	300
ggtgaaaaag cggccgca		318

<210>	14
<211>	318
<212>	DNA
<213>	Artificial Sequence

Sequence Listing

<220>

<223> AZF40

<400> 14

atggaattgc ctccaaaaa gaagagaaag gtagggatcc gaattcccgg ggaaaaaccg	60
ttccagtgtg aaacttgtca gcgaaagttc tcccggtccg accacctgaa gacccacacc	120
aggactcata ccggggaaaa accgtataaa tgtaagcaat gtgggaaggc ttttgatgt	180
ccctcaaacc ttggaaggca tggaaggact cacaccggg aaaaaccgtt ccagtgtaaa	240
acttgtcagc gaaagttctc ccggtccgac cacctgaaga ccacaccag gactcatacc	300
ggtgaaaaag cggccgca	318

<210> 15

<211> 219

<212> DNA

<213> Artificial Sequence

<220>

<223> TatdMT

<400> 15

atggagccag taaatcctag cctagagccc tggaagcacc caggaagtca gcctaaaact	60
gcttgtagca attgctattg tgcaaagtgt tgctttcatt gccaaagttg tttcataaca	120
aaagccttag gcatctccta tggcagggca aagcggagac agcgacgaag acctcctcaa	180
ggcagtcaga ctcatcaagt ttctctatca aagctgac	219

<210> 16

<211> 390

<212> DNA

Sequence Listing

<213> Artificial Sequence

<220>

<223> POZ-Domain

<400> 16

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atggccggcg gcgtggacgg ccccatcggg atcccgttcc cggaccacag cagcgacatc      60
ctgagtgggc tgaacgagca gcggacgcag ggcctgctgt gcgacgtggt gatcctggtg      120
gagggccgcg agttccccac gcaccgctcg gtgctggccg cctgcagcca gtacttcaag      180
aagctgttca cgtcggggcg cgtgggtggac cagcagaacg tgtacgagat cgacttcgtc      240
agcgccgagg cgctcaccgc gctcatggac ttcgcctaca cggccacgct caccgtcagc      300
acagccaacg tgggtgacat cctcagcgcc gcccgctgc tggagatccc cgccgtgagc      360
cacgtgtgcg ccgacctcct ggaccggcag                                     390

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<210> 17

<211> 181

<212> PRT

<213> Artificial Sequence

<220>

<223> AZF39-TatdMt

<400> 17

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Met Glu Leu Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile Pro
  1             5             10             15

Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg
          20             25             30

Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Pro
        35             40             45

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Sequence Listing

Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu
 50 55 60

Arg Arg His Gly Arg Thr His Thr Gly Glu Lys Pro Phe Gln Cys Lys
 65 70 75 80

Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr
 85 90 95

Arg Thr His Thr Gly Glu Lys Ala Ala Ala Asp Ile Met Glu Pro Val
 100 105 110

Asn Pro Ser Leu Glu Pro Trp Lys His Pro Gly Ser Gln Pro Lys Thr
 115 120 125

Ala Cys Thr Asn Cys Tyr Cys Ala Lys Cys Cys Phe His Cys Gln Val
 130 135 140

Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly Arg Ala Lys Arg
 145 150 155 160

Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr His Gln Val Ser
 165 170 175

Leu Ser Lys Leu Ile
 180

<210> 18

<211> 181

<212> PRT

<213> Artificial Sequence

<220>

<223> AZF40-TatdMt

<400> 18

Met Glu Leu Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile Pro

Sequence Listing

1	5	10	15
Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg			
20	25	30	
Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Pro			
35	40	45	
Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu			
50	55	60	
Arg Arg His Gly Arg Thr His Thr Gly Glu Lys Pro Phe Gln Cys Lys			
65	70	75	80
Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr			
85	90	95	
Arg Thr His Thr Gly Glu Lys Ala Ala Ala Asp Ile Met Glu Pro Val			
100	105	110	
Asn Pro Ser Leu Glu Pro Trp Lys His Pro Gly Ser Gln Pro Lys Thr			
115	120	125	
Ala Cys Thr Asn Cys Tyr Cys Ala Lys Cys Cys Phe His Cys Gln Val			
130	135	140	
Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly Arg Ala Lys Arg			
145	150	155	160
Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr His Gln Val Ser			
165	170	175	
Leu Ser Lys Leu Ile			
180			

<210>	19
<211>	313
<212>	PRT
<213>	Artificial Sequence

Sequence Listing

<220>

<223> POZ-Domain-AZF39-TatdMt

<400> 19

Met Ala Gly Gly Val Asp Gly Pro Ile Gly Ile Pro Phe Pro Asp His
 1 5 10 15

Ser Ser Asp Ile Leu Ser Gly Leu Asn Glu Gln Arg Thr Gln Gly Leu
 20 25 30

Leu Cys Asp Val Val Ile Leu Val Glu Gly Arg Glu Phe Pro Thr His
 35 40 45

Arg Ser Val Leu Ala Ala Cys Ser Gln Tyr Phe Lys Lys Leu Phe Thr
 50 55 60

Ser Gly Ala Val Val Asp Gln Gln Asn Val Tyr Glu Ile Asp Phe Val
 65 70 75 80

Ser Ala Glu Ala Leu Thr Ala Leu Met Asp Phe Ala Tyr Thr Ala Thr
 85 90 95

Leu Thr Val Ser Thr Ala Asn Val Gly Asp Ile Leu Ser Ala Ala Arg
 100 105 110

Leu Leu Glu Ile Pro Ala Val Ser His Val Cys Ala Asp Leu Leu Asp
 115 120 125

Arg Gln Gly Tyr Met Glu Leu Pro Pro Lys Lys Lys Arg Lys Val Gly
 130 135 140

Ile Arg Ile Pro Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg
 145 150 155 160

Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr
 165 170 175

Gly Glu Lys Pro Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys

Sequence Listing

180 185 190
 Pro Ser Asn Leu Arg Arg His Gly Arg Thr His Thr Gly Glu Lys Pro
 195 200 205
 Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
 210 215 220
 Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Ala Ala Ala Asp Ile
 225 230 235 240
 Met Glu Pro Val Asn Pro Ser Leu Glu Pro Trp Lys His Pro Gly Ser
 245 250 255
 Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Ala Lys Cys Cys Phe
 260 265 270
 His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly
 275 280 285
 Arg Ala Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
 290 295 300
 His Gln Val Ser Leu Ser Lys Leu Ile
 305 310

<210> 20
 <211> 313
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> POZ-Domain-AZF40-TatdMt

<400> 20
 Met Ala Gly Gly Val Asp Gly Pro Ile Gly Ile Pro Phe Pro Asp His
 1 5 10 15

Sequence Listing

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Ser Ser Asp Ile Leu Ser Gly Leu Asn Glu Gln Arg Thr Gln Gly Leu
      20              25              30

Leu Cys Asp Val Val Ile Leu Val Glu Gly Arg Glu Phe Pro Thr His
      35              40              45

Arg Ser Val Leu Ala Ala Cys Ser Gln Tyr Phe Lys Lys Leu Phe Thr
      50              55              60

Ser Gly Ala Val Val Asp Gln Gln Asn Val Tyr Glu Ile Asp Phe Val
      65              70              75              80

Ser Ala Glu Ala Leu Thr Ala Leu Met Asp Phe Ala Tyr Thr Ala Thr
      85              90              95

Leu Thr Val Ser Thr Ala Asn Val Gly Asp Ile Leu Ser Ala Ala Arg
      100             105             110

Leu Leu Glu Ile Pro Ala Val Ser His Val Cys Ala Asp Leu Leu Asp
      115             120             125

Arg Gln Gly Thr Met Glu Leu Pro Pro Lys Lys Lys Arg Lys Val Gly
      130             135             140

Ile Arg Ile Pro Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg
      145             150             155             160

Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr
      165             170             175

Gly Glu Lys Pro Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys
      180             185             190

Pro Ser Asn Leu Arg Arg His Gly Arg Thr His Thr Gly Glu Lys Pro
      195             200             205

Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
      210             215             220

Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Ala Ala Ala Asp Ile

```

Sequence Listing

225 230 235 240
 Met Glu Pro Val Asn Pro Ser Leu Glu Pro Trp Lys His Pro Gly Ser
 245 250 255
 Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Ala Lys Cys Cys Phe
 260 265 270
 His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly
 275 280 285
 Arg Ala Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
 290 295 300
 His Gln Val Ser Leu Ser Lys Leu Ile
 305 310

<210> 21
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Forward primer for pcDNA3.0-artificial zinc-finger fusion TatdMt
 constructs

<400> 21
 gatcgggtacc atggaattgc ctccaaaaaa gaag 34

<210> 22
 <211> 34
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Reverse primer for pcDNA3.0-artificial zinc-finger fusion TatdMt
 constructs

Sequence Listing

<400> 22

gatcgatatc tgcggccgct ttttcaccgg tatg

34